

Ny-Ålesund Newsletter

31st Edition – January 2013

MEMORIAL CEREMONY, 50 YEARS AFTER THE KINGS BAY ACCIDENT



From left: Director Kings Bay Mr. Ole Øiseth, HM The King Harald V, Minister of Labour Mrs. Anniken Huitfeldt, Governor of Svalbard Mr. Odd Olsen Ingerø, Kings Bay Chairman Mr. Knut Ore and Electrician Kings Bay Mr. Tore Brattlien. Photo by Kings Bay AS.

On 5th of November, a memorial ceremony was held in Ny-Ålesund, 50 years after the Kings Bay accident in 1962 which cost 21 peoples' lives inside the coal mines. Among several official guests were; HM The King Harald V of Norway, Parliament President Mr. Dag Terje Andersen, Minister of Labour Mrs. Anniken Huitfeldt and the Governor of Svalbard Mr. Odd Olsen Ingerø.

Veterans from the mining period and family members of miners were also present. The official program started by the old bauta with a wreath-laying ceremony and was followed by an official dinner in the mess hall for all inhabitants in town.

By Elisabeth Bjerke Råstad, Kings Bay AS

Disputation: Johannes Rafael Kühnel



On 7th of February 2013, Johannes Rafael Kühnel at Department of Geosciences, University of Oslo will be defending the thesis:

Reactive Nitrogen: Transport to and deposition at the high Arctic site Ny-Ålesund, Svalbard

Planning of new Czech station

A new Czech station is under planning. The construction work for a new station building will start summer 2013, to the East of the shop building.

ASSW 2013 and 38th NySMAC meeting

The 38th meeting will be held during ASSW 2013 in Krakow, Poland 14-20 April.

NEWS from Kings Bay

by Elisabeth Bjerke Råstad



Ny-Ålesund permanent staff, winter/summer 2012. Photo: Kings Bay AS.

New employees

Mrs. Mari Hernandez Gabrielsen is hired as the office manager in Kings Bay from November 2012. Mrs. Bodil Myklevoll is hired as the consultant since May 2012, and Mrs. Randi Bjørnsland is hired as cook from February 2013.

Construction, maintenance and development

In summer 2012, the outer panel in Samfunnshuset got improved insulation and the windows in the Service building were exchanged, all to reduce energy costs and consumption. The diesel tanks were sand blast and painted, and London 1 was insulated to be a permanent resident for Kings Bay employees. Gruvebadet is being upgraded with better insulation and improved facilities these days, to use for scientific and other purposes. The new laboratory rooms in the ground floor of Kings Bay Marine Laboratory is planned to be furnished during spring/summer 2013.

Radiation monitoring station

By Stephen Hudson, NPI

NPI is in the process of upgrading and relocating their radiation monitoring station. A new instrument setup will be installed this spring outside Zeppelin Station to monitor the incoming longwave (thermal infrared) radiation and diffuse, direct and total shortwave (solar) radiation. Located above much of the atmospheric boundary layer over Ny-Ålesund, these observations, in combination with similar ones from town (where AWI will continue their monitoring of atmospheric radiation), will allow for investigations into the effect of the lower atmosphere on radiation reaching Ny-Ålesund and Kongsfjorden. This

Ny-Ålesund Symposium 2013

Theme: The Changing Arctic – Opportunity or Threat

The host of The Ny-Ålesund Symposium 27-29 May 2013 is Mr. Espen Barth Eide, Minister of Foreign Affairs of Norway. International high-level participants will address the Symposium, including politicians, renowned scientists, business executives and representatives of NGOs. Participation is limited to 40, by personal invitation only.

This year's theme aims at contributing to the necessary dialogue between governments, local peoples, and public and private actors in order to meet the new challenges facing the Arctic region. The symposium will include the following topics:

- Arctic shipping
- Petroleum development
- Conservation of Arctic biodiversity and ecosystems
- Challenges to indigenous and local peoples

effect will be interesting to examine year round, and especially during Arctic haze events in spring; it will be aided by the many ongoing measurements of aerosols and other atmospheric properties from both Ny-Ålesund and Zeppelin. The new setup will include a real-time display of the data on the Internet, as well as improved archiving and distribution of the data.

Plans are also under way to develop, test and eventually routinely operate a setup to accurately monitor the radiation budget components near the equilibrium line on Kongsvegen. This setup will include high-quality instruments that are heated and ventilated to ensure excellent data from an area representative of much of the region. Data will be transmitted by satellite modem.

Sverdrup Station News

The Sverdrup Station met the new year with three new employees.

Already in August 2012 Anne-Cathrine Nilsen started as new operative engineer. She has been three seasons at Bjørnøya Meteorological Station and is thus our weather observation expert.

In October operative engineer Bjørn Einar Johnsen joined the team. He has been working at the Sverdrup Station already in the 90s and can tell stories from the old days.

Marta Jansen, the third operative engineer, has been at Sverdrup Station since last year and acts as station manager when the current station manager, Christiane Hübner, is on leave.

Christiane arrived in November and has been working at the Svalbard Science Forum in Longyearbyen during the last years. Both, the station manager and the operative engineers are following a duty system with three work months, followed by one free month. Thus, there will be a station manager and two engineers at the station at any time.

Together with Steinar Aksnes and - during summer - Wojtek Moskal as responsables for material and logistics, the Sverdrup Station has again an enthusiastic team that is looking forward to assist new and established research groups and conduct monitoring tasks both at the Sverdrup and the Zeppelin Station.

By Christiane Hübner, NPI



Old and new staff met at the airport 2nd November 2012. From left to right: Bjørn Johnsen, Christiane Hübner, Sanja Forström, Max König, Marta Jansen, Anne-Cathrine Nilsen.

New contact information for the Italian station in Ny-Ålesund

The CNR has activated and started to use its new e-mail addresses for the coordination and management of the Italian Arctic research activities at Dirigibile Italia and Svalbard.

For general information, questions or generic issues: info.arctic@cnr.it

For communications or information of administrative nature,

and invoices or quotations for services related to Arctic research: amm.arctic@cnr.it

For communications with the Arctic Station Leader, booking, reservations, expedition of material and planning of Arctic research: station.arctic@cnr.it

The old e-mail addresses was still active until the 30th of October 2012, only for incoming messages, and then will be permanently disabled.

The AWIPEV underwater observatory, an important tool for investigating nearshore communities in Kongsfjorden

The AWIPEV underwater observatory has been installed in June 2012 and consists of a base station at 12 m depth at the end of the Old Pier in Ny Ålesund and a control unit on the shore (Fig. 1).

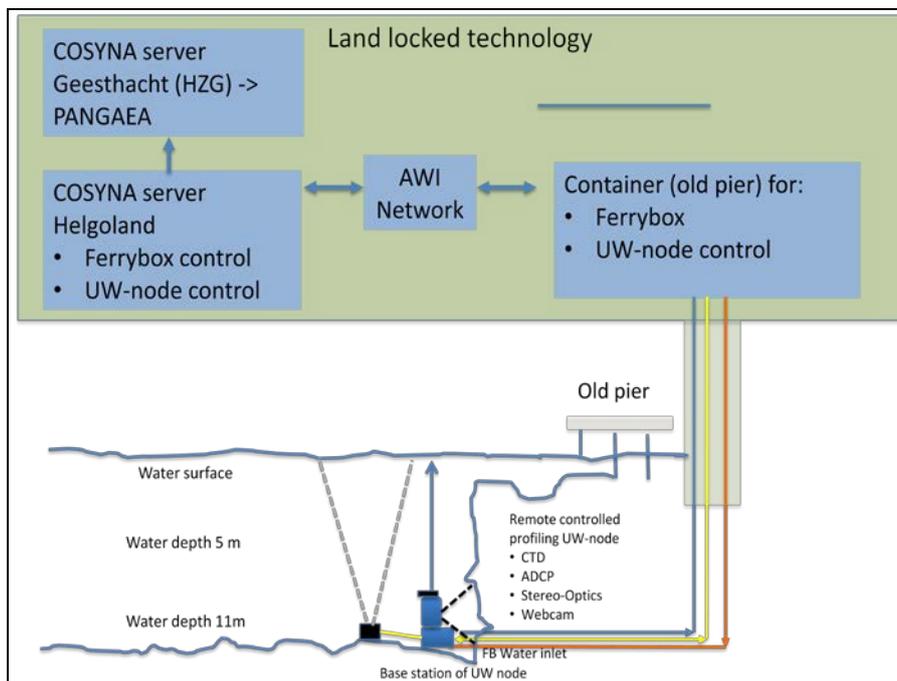


Figure 1.

The base station is equipped with a stereo camera system and a so called CTD probe which measures water temperature, pressure and salinity. The entire system can be remotely moved to any depth between 2 and 12 m water depth. The high resolution images allow to identify the mobile fauna on species level, measure their dimensions and even calculate their biomasses. The observations will be done year- round and the pictures are transferred in real time to the COSYNA- Server at the AWI Helgoland in Germany. By this way, observations about the seasonal and temporal dynamics and the diel activity of the mobile fauna throughout the year are possible, even in winter. Fig. 2 shows the underwater camera system during deployment, Fig. 3 numerous jellyfish appearing 16.06.2012 at midday and Fig. 4 the first krill appearing at 02:30 am at 22.10.2012



Figure 2.



Figure 3.



Figure 4.

The observatory is also equipped with a so- called Ferry- Box, a multi- parameter monitoring system measuring abiotic parameters like temperature, salinity, turbidity and others in 12 m water depth. In future, more parameters will be measured including the radiation regime, which is most important for macroalgal production. Such a monitoring station has been on the wish- list of many researchers in Ny Ålesund for a long time and such a station was also included as necessary tool in the Kongsfjorden Ecosystem Program. It is now installed, works fully automatically and almost service free and delivers the urgently needed data online to Germany, where they will be made available to the international scientific community after validation. The website is: http://www.awipev.eu/en/routine_data/underwater_observatory/

The Ferry- Box data will allow us to estimate possible threats for example to the seaweed communities at the Old Pier (Fig. 5) and in whole Kongsfjorden due to global climate changes. Enhanced temperatures will result in a stronger input of turbid melt water in the fjord, by which the lower distribution limit of seaweeds will be elevated as the available light does not match the light demands of seaweeds. On the other hand a stronger input of freshwater will lower the salinity in the upper water layers. Such a lowering of the salinity will not be tolerated by the seaweeds, so the upper distribution limit of seaweeds will be lowered to greater depths. One other threat to seaweeds acting in similar direction is UV- B radiation which is presently enhanced especially in spring due to stratospheric ozone depletion. So not only the lower distribution limit, but also the upper distribution limit of seaweeds will be changed, restricting the seaweed communities to a narrow depth range. How narrow this depth range will actually be, will be studied in the next years. The studies are performed by three work groups from the Alfred Wegener Institute in Bremerhaven, Sylt and Helgoland.

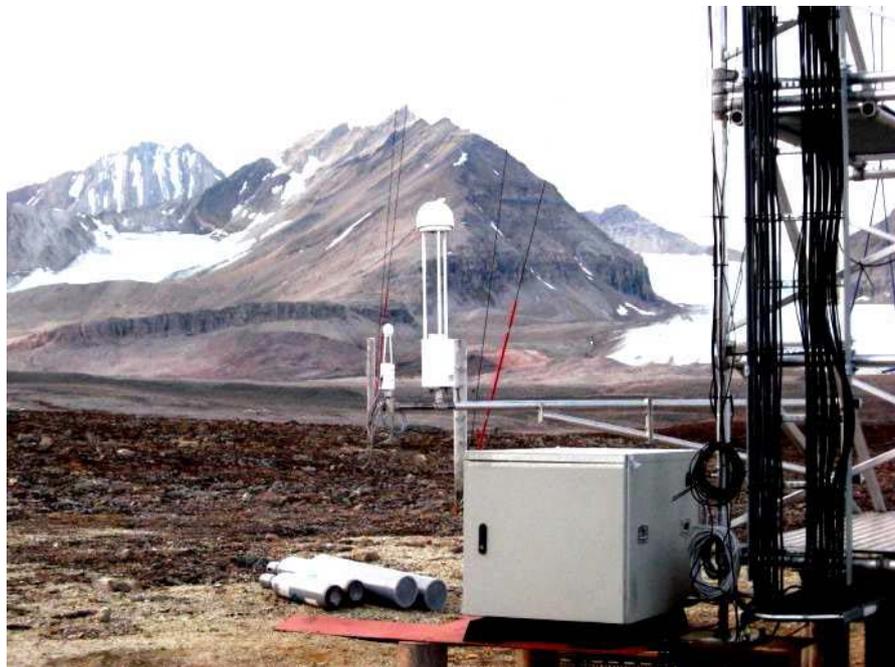


Figure 5.

A new set up to Measure greenhouse gas fluxes on the Amundsen Nobile Climate Change Tower (CCT)

Viola A. P.^(1a) T. Choi⁽²⁾, M. Mazzola^(1b) C. Lanconelli^(1b) M. Busetto^(1b)

The experimental platform Amundsen Nobile Climate Change Tower (CCT) was conceived to investigate arctic ABL processes in Ny-Ålesund. In particular the energy budget, and the role played by aerosols, clouds, air/snow/ice/soil (permafrost and vegetation) interaction in determining this budget as well as dynamic processes in Atmospheric Boundary Layer.



Calibration set up of greenhouse gas fluxes instruments

Measurement activities have been running since 2009. The meteorological and micrometeorological set up has been implemented by a specific payload to measure the greenhouse gas fluxes during May 2012 as part of the cooperation activities between CNR and KOPRI, regulated by a LoU signed February 2012 in Seoul.

Open- and closed- path eddy covariance system, measuring directly the exchanges of CO₂, CH₄, energy and momentum between the atmosphere and permafrost, was installed at a height of 22 m of Amundsen Nobile Climate Change Tower. It consists of 3-D sonic anemometer, open-path CO₂/H₂O analyzer, open-path CH₄ analyzer and closed-path CH₄/CO₂/H₂O analyzer. Data are sampled at a rate of 10 Hz and stored at a data logger, backed up at a laptop computer through RS232 communication and transferred to KOPRI via the internet. The data access is provided to the ISAC – CNR. The eddy covariance system will be long-term and continuously operated and

used to evaluate whether the permafrost near Ny-Alesund, Svalbard at high Arctic region is a sink or source for the atmospheric carbon at the moment and how its role as sink/source changes with the Arctic warming.

Moreover the EC system, combined with with two other sonic anemometers at 7.5 and 3.0 m above the ground will be used to profile the turbulent parameters and verify the validity of the Monin Obukov similarity theory in a such a complex orographic area. Joint aerosol measurement have also been carried out at the aerosol laboratory of Gruvebadet.

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View of the greenhouse gas sensors set up on the CCT

SSF: New logo and website

The Research Council of Norway
Svalbard Science Forum (SSF) Norsk

HOME PAGE
About us
Research
Research in Svalbard (RIS) Database
Funding
News
Workshops
SIOS
Calendar
Useful links

The Svalbard Science Forum (SSF) promotes research coordination and collaboration in Svalbard.
Read more

News

Status report on PCBs in Svalbard
The final report "PCBs on Svalbard: Status of Knowledge and Management 2011" describes results from the PCB Project in Svalbard.

Russian scientists seek cooperation
Does moss grow on glaciers?
Russian scientists working in Western Spitzbergen have found and identified several species of moss growing on glaciers. They seek research cooperation in new projects.

SSF Strategic Grants - allocations fall 2012
The Research Council of Norway has decided to allocate funding to five cooperation workshops and one pre-project, in total NOK 1.4 million from the Svalbard Science Forum strategic funds.

More news

Calendar

05.02.13 - 07.02.13
SSF workshop No. 4: **Monitoring at Zackenberg – lessons for Svalbard**
Svalbard Science Forum (SSF) aims to create more

Research in Svalbard
RIS Database
Project and data set registration
Search

Funding
13.02.2013
Funding for cooperation projects and workshops related to research in Svalbard (SSF)
All calls for proposals from the Research Council

SVALBARD SCIENCE FORUM

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Related programmes
Climate change and impacts in Norway (NORKLIMA)
Polar Climate Research (POLARCLIMA)
Polar Research programme (POLARPROG)

RSS from SSF

4th SSF cooperation workshop in Copenhagen

The 4th SSF cooperation workshop takes pace in Copenhagen 5-7 February.

"Monitoring at Zackenberg – lessons for Svalbard" is the theme for the workshop.

On the SSF website it says that: "...The Zackenberg station in Greenland has for many years been the location for successful monitoring programs. The lessons from this station are therefore very valuable for similar programs in Svalbard."

Funding opportunities - SSF

Funding for cooperation projects and workshops related to research in Svalbard.

Deadlines: 13th of February and 17th of October 2013

Two former employees of NPI and Kings Bay have died

In October last year we received the sad news that two people well known from the Ny-Ålesund community have died.

Geir Aasebøstøl (51), former NPI employee and Even Lützenkirchen né Moldstad (49), former Kings Bay employee.

NySMAC meeting and Ny-Ålesund seminar in Rome

The 39th meeting and the 11th Ny-Ålesund seminar will take place in Rome, Italy in October 2013. CNR has offered to host the seminar.

Topics from the 37th NySMAC meeting

Topics from the previous NySMAC meeting held in Groningen, The Netherlands 13-14 November 2012:

- Acceptance of agenda and follow up on minutes decisions
- Status reports from member institutions
- Information from Kings Bay AS
- Svalbard Science Forum work report
 - Funding programmes
 - RiS database
 - Workshops 2012/2013
 - New logo and website
- Flagship programmes – how to proceed with further work
- Geodetic Earth Observatory in Ny-Ålesund
 - Permission given to build the antenna park, instrumentation building and access road was given subject to specific conditions.
- New building for Ny-Ålesund Geomagnetic Observatory – University of Tromsø
- "Aerosol observations at Zeppelin, 2000-2010" – presentation of results.
- Monitoring of local environment by SU and NILU with support from NP.
 - Presentation of results from the report written by Johan Ström, SU.
- Ny-Ålesund charter – presentation of draft document.
- SIOS and Ny-Ålesund – collaboration and priorities for Ny-Ålesund.
- East-Svalbard – status on how the work will proceed.
- Masaki Uchida from NIPR was elected deputy chairman.

Input to Ny-Ålesund Newsletter

If you would like to contribute to future editions of this newsletter, please e-mail nysmac@npolar.no. Any ideas or suggestions for topics are also welcomed. Editor: Marit R. Pettersen, NySMAC Secretariat. **Next edition: June 2013**

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